Commonwealth of Massachusetts
Office of Consumer Affairs and Business Regulation
DIVISION OF ENERGY RESOURCES

Summary of the Proposed Final Regulations for the Massachusetts RENEWABLE ENERGY PORTFOLIO STANDARD at 225 CMR 14.00

November 6, 2006

A. INTRODUCTION

This document provides background, a summary, and discussion of the proposed final Regulations for the Massachusetts Renewable Energy Portfolio Standard ("RPS") at 225 CMR 14.00 ("Regulations").[1] This is the first revision of those Regulations since the Division of Energy Resources ("DOER") promulgated the RPS Regulations as 225 CMR 14.00 on April 26, 2002.

The clear statutory purpose of the RPS is to stimulate the development of new electric generating units that use renewable fuels and technologies by requiring that retail electricity suppliers selling electricity in Massachusetts include a prescribed, annually-increasing percentage of electricity supply from qualified renewable generators. The policy objectives of the statute and of its Regulations, as administered by DOER are the following:

- Increase the share of our electricity generated by new renewable resources;
- Decrease atmospheric pollution from the regional fleet of power plants that serve Massachusetts consumers;
- Diversify the fuels used to generate power that serves Massachusetts consumers;
- Decrease the reliance of Massachusetts on fossil fuels imported from other regions; and
- Moderate electricity price volatility in Massachusetts caused by reliance on imported fossil fuels.

[1] The Massachusetts Renewable Energy Portfolio Standard was enacted by the Legislature on November 25, 1997, as General Law chapter 25A, section 11F.

During the first four years of administering the RPS (2002-2006), DOER, retail electricity suppliers, and renewable energy industry participants (DOER as the regulator, the others as the regulated) identified provisions of the Regulations that required clarification or modification in order to accomplish the intent of the enabling statute more effectively and efficiently. To a considerable extent, those clarifications concerned the manner in which DOER qualifies biomass electric generating units under the statutory criteria of "low emissions" and "advanced biomass power conversion technologies." Other important changes in the Regulations include the following:

- providing additional detail for the definition of "eligible biomass fuels;"
- revising the provisions for qualifying generating units under the "vintage waiver;"
- committing DOER to a date by which the continuation of RPS minimum percentages for the period beyond 2014 will be decided; and
- clarifying how retail electricity suppliers must ascertain and document their compliance with RPS.

B PUBLIC REVIEW PROCESS

Prior to this year's formal public process, DOER undertook a detailed review of the Regulations and consulted with numerous stakeholders in an informal but public inquiry during the second half of 2005. The proposed revisions in the Regulations both address the issues that DOER and the stakeholders identified in the 2005 inquiry and respond to the comments received during the formal public review process in 2006.

On June 2, 2006, DOER issued for public comment proposed revisions to the RPS Regulations along with an accompanying draft *Guideline on the RPS Eligibility of Biomass Generation Units* (the "*Guideline*"). On June 2, 2006, DOER sent a *Notice of Public Hearing* to the Secretary of State for June 16, 2006, publication in the *Massachusetts Register*, as well as to three newspapers of general circulation – the *Boston Herald*, the *Worcester Telegram & Gazette*, and the *Springfield Union-News* – for publication early the following week. A Public Hearing on the proposed revisions, as well as on the concurrently issued draft *Guideline*, was held in Boston on June 28, 2006. Interested persons were invited to provide oral statements at the Hearing and/or written comments. All notices, documents, written comments, and other information were posted electronically in the RPS section of the DOER website at this URL: http://www.mass.gov/doer/rps/rps_rule_revs.htm.

The June 28th Hearing was attended by 41 individuals, many of whom made oral statements that DOER recorded electronically. Written comments were received from eleven individuals or groups by the July 6th deadline for initial comments and from 26 by the July 18th deadline for final comments. All 37 written comments were listed and posted electronically in the RPS section of the DOER's website, cited above.[2]

[2] DOER also received short letters (not posted electronically) from a number of interested citizens who expressed opposition to the burning of construction and demolition (C&D) debris either in Massachusetts incinerators or in the

C. SUMMARY OF STAKEHOLDER COMMENTS

In the course of the public comment process, the views of various stakeholders were made clear. Biomass developers welcomed the simplification and clarity embodied in the proposed Regulations. However, some commenters objected to revisions that would facilitate development of biomass projects that would be RPS-eligible. Developers of non-biomass renewable projects (especially wind developers) questioned DOER's interpretation of portions of the RPS statute to allow greater biomass eligibility, especially the proposed elimination of the categorical exclusion of stoker combustion, as well as DOER's authority to address certain issues through the use of guidelines rather than formal regulations. Environmental groups also criticized interpretations of the statute that expand biomass eligibility.

Of all of the revisions, DOER's proposal to explicitly list as a "eligible biomass fuel" wood from construction and demolition (C&D) debris evoked the greatest number of comments, especially from individual citizens who live in or near the Town of Russell, where a new, 50 MW, non-C&D, biomass plant is proposed. Most of their comments discussed the dangers of non-organic materials (paints, resins, glues, toxic metals, etc.) in C&D waste and the potential for its emissions after burning to harm human health. Some biomass developers were in favor of C&D wood as an eligible fuel. Environmental groups were generally opposed, but some were open to the use of C&D wood in a carefully monitored pilot project to assure stringent sorting requirements to eliminate contaminated wood content. Several individual citizens from the town of Russell spoke at the hearing about their fears of the health affects of burning C&D debris. DOER consulted extensively with DEP on this matter and did not find evidence to support their fears. DOER believes that, with appropriate regulatory restrictions on the characteristics of the wood waste that is burned, on emissions, and on emissions monitoring, clean C&D wood can be burned to generate power without endangering human health. The proposed final Regulations narrow the eligibility for RPS qualified generation to C&D wood that has no more than *de minimus* non-organic material, and the Regulations require that any such power plant will need to obtain an air pollution permit from its jurisdiction.

In addition to the detailed comments on low-emission, advanced biomass power conversion technologies and on the eligibility of wood from C&D debris, the following substantive issues were addressed in some comments:

- Definition of "low-emission," referencing the concurrently issued draft *Guideline*;
- Elimination of the Advisory Ruling provision;
- Use of guidelines as the locus of eligibility standards;
- Changes in the Vintage Waiver provisions;
- Location and eligibility of behind-the-meter and off-grid generation; and
- Location of power plants outside of the ISO New England Control Area from which New Renewable Generation can be imported

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Russell Biomass plant proposed for Russell, MA. That same view was also expressed in some of the letters that also directly addressed the proposed RPS revisions and, therefore, were posted electronically.

D. DISCUSSION OF THE MAJOR ISSUES

Clarifying the Eligibility Criteria for Biomass Generation Units

The RPS statute, part of the Electric Industry Restructuring Act of 1997, says that biomass units, to be RPS eligible, must be "low emission" and use "advanced biomass power conversion technologies." These criteria for RPS eligibility were incorporated in the initial version of the RPS Regulations, promulgated in 2002. However, no specific definition of these terms was included in that original version of the Regulations. The primary focus of the current revisions is to clearly define the requirements for demonstrating that a unit will be "low-emission" and use an "advanced biomass power conversion technology." DOER's goal is to give would-be developers a clear understanding of what is required to be RPS eligible, and to reduce the difficulty and resulting confusion of deciding on the eligibility of biomass units on a case-by-case basis (as DOER has done for the last three years). The streamlined and simplified eligibility criteria for biomass units in the proposed final Regulations and further revised *Guideline* allow DOER to eliminate from the Regulations the Advisory Ruling provision, currently at 225 CMR 14.06 (5).

Specifying "Low-Emission" Criteria: The proposed final Regulations, by reference to the *Guideline*, reduce the number of pollutants that must be met to qualify as being "low emission" to two: nitrogen oxides (NOx) and particulate matter (PM). This is a significant departure from past practice, whereby units were required to meet emission limits for a full suite of pollutants (including SO2, NOx, PM, ammonia, CO, VOC, toxics, opacity), but with the particular limits established on a case-by-case basis in consultation with the Department of Environmental Protection (DEP). For the new *Guideline*, we have determined in consultation with the DEP that NOx and PM are the principle emissions of concern with biomass plants, and that limits on these two, when coupled with the standard requirement to obtain a permit from a state's air pollution control agency for the full suite of pollutants described above, fulfill the legislative requirement that the units be "low emission." The specific limits on NOx and PM, as well as procedures for monitoring and reporting emissions, are found in the accompanying *Guideline* referenced by the Regulations. The use of the *Guideline* will allow the exact emission limits to be refined over time as technology improves. Specification of specific limits and fewer pollutants will provide biomass developers with the greater certainty on the project design and equipment selection needed to achieve eligibility.

Specifying "Advanced Biomass Power Conversion Technology" Criteria: The new Regulations clarify that a biomass power conversion technology is "advanced" if it meets one or the other of the following criteria:

- It has become commercially available not more than 10 years prior to the date of the unit's Statement of Qualification application (SQA) submission to DOER, or
- The *class* of power conversion technology (e.g., stoker, fluidized bed) has been commercially available for more than 10 years but has design features that have become commercially available within 10 years prior to the date of the unit's SQA submission that will improve the unit's performance in at least one of the following areas: fuel conversion efficiency, operations and maintenance, or materials.

The previous approach had been to categorically exclude some "old" technologies (pile burn and stoker combustion) and to include some arguably "newer" and more "advanced" technologies. This simplistic approach proved very difficult to administer as it soon became clear that the combustion efficiency of older technologies were being dramatically and continuously upgraded to qualify for RPS eligibility, and that they were arguably as or more fuel efficient than some relatively newer technologies. Categorical exclusions proved far too rigid.

The new criteria offer several benefits compared to the previous approach for the following reasons:

- They do not discriminate against any technology, *per se*.
- They allow for improvements in older, well-demonstrated designs that make them truly advanced.
- They allow development of entirely new types of conversion technologies, such as bioreactors, which may be less efficient in converting fuel but have other benefits, such as producing usable heat or chemicals in addition to electrical power.
- They simplify and make transparent the qualifications for eligibility so that developers can select equipment and design projects faster and with greater confidence of approval.
- They eliminate the need for DOER to continually devise new criteria as technology advances.

Clarifying the Eligibility of Wood from C&D Debris as a Biomass

The new Regulations clarify that wood from construction and demolition (C&D) debris is an RPS-eligible biomass fuel but limits the non-organic material (e.g., resins, paints, glues, laminates) it may contain to "*de minimus*" amounts. This is a tightening of the approach proposed in the proposed Regulation published in June, which allowed wood from C&D debris to be an eligible biomass fuel without specifying any limits regarding its non-organic content. That proposal would have formalized what had previously been DOER's informal practice, in which we regarded C&D wood (without further specification) to be eligible as a type of "organic refuse derived fuel."

Because of the potential for emissions of toxic pollutants from unrestricted use of C&D debris, this proposed revision resulted in the greatest number of public comments, ranging from caution to concern to alarm. A minority set of comments expressed general support for C&D or support if the debris had been sorted to remove most of the non-organic materials. DOER consulted with the DEP which expressed strong support for use of C&D debris, with restrictions on its non-organic content.

The new Regulations allow for the use of C&D debris under the provision in the statute that lists "organic refuse-derived fuel" among the eligible biomass fuels. We believe that C&D debris is properly included within this category but that restriction on the non-organic content is required both to achieve the status of an "organic" fuel and to insure the fuel is "low emission." To become eligible, C&D debris, before being combusted, must be sorted and treated so that it contains only *de minimus* quantities of non-organic material. Following publication of the Regulations, DOER, in consultation with the DEP, will modify the accompanying *Guideline* to

define the exact limits on non-organic material that must be met to be deemed *de minimus.* DOER will develop these criteria and publish them and seek public comment on them in the first half of 2007 before formally modifying the *Guideline*. This approach will impose appropriate limits on the use of C&D debris as an RPS fuel to insure they are "low emission" with regard to hazardous air pollutants and provide incentives for developers to improve the technologies for collecting, sorting and treating C&D debris.

D. OTHER PROPOSED FINAL REVISIONS

The proposed final revisions to the RPS Regulations include the following other significant changes:[3]

1. Eligible New Renewable Fuels, revised and clarified:
    a. Defines "Organic Refuse-Derived Fuel," which the statute lists as an Eligible Biomass Fuel. This term no longer excludes the derivation of fuel from municipal solid waste, and it is now separately defined rather than simply being listed as one of the Eligible Biomass Fuels. This is intended to expand the use of such fuels, excluding credit for non-biomass derived fractions, provided that only advanced, non-combustion technologies are used to derive them, resulting in very clean burning fuels. Wood from C&D debris is also included under this definition. At 14.02
    b. Moves "anaerobic digester gas" from the definition of Eligible New Renewable Fuel to Eligible Biomass Fuel, where it properly belongs per the statute. At 14.02.
    c. Introduces the new term "Blended Fuel" and provides for its partial eligibility in a revised "Co-Firing and Blended Fuel Waiver." This includes such liquid or gaseous fuels as biodiesel blends and possibly some Organic Refuse-Derived Fuels, in which a pure Eligible Biomass Fuel or landfill methane gas is blended with ineligible fuels, such as petroleum diesel or pipeline natural gas. At 14.02 and 14.05 (3).
2. RPS "Guidelines" (including the concurrently-issued biomass *Guideline*) may be issued and updated periodically and take effect upon issuance, except that but any revised biomass eligibility criteria would take effect 24 months following publication of any revision of the biomass *Guideline*. At 14.02 and 14.05 (1) (a) 6.b.
3. Low-Emission, Advanced Biomass Power Conversion Technologies:
    a. Eligibility criteria for "low-emission" are detailed in the *Guideline*. In response to public comments that the draft *Guideline* was too long, complicated, and prone to subjective determination when determining if a technology qualifies as advanced, the eligibility criteria have been greatly simplified, removed from the *Guideline*, and incorporated into the Regulations. At 14.05 (1) (a) 6.a and 6.b.
    b. Defines "low-emission, advanced biomass power conversion technologies," by reference to the *Guideline*, as discussed above. At 14.05 (1) (a) 6.b – 6.f.

[3] References are to relevant sections of 225 CMR 14.00, and capitalized terms are defined in the RPS Regulation at 14.02 or are introduced in other sections of the Regulation.

c. Adds a definition of "Power Conversion Technology," which is used both for the eligibility of biomass units and for certain provisions under the Vintage Waiver. At 14.02, 14.05 (1) (a) 6.a, and 14.05 (2) (c).

d. Requires that a biomass unit with a Commercial Operation Date prior to 1998, whether retooled or not, can qualify only under a Vintage Waiver and must meet the criteria applicable to new plants at the time the unit's Statement of Qualification application is filed with DOER.[4] At 14.05 (1) (a) 6.b & 6.d, and at 14.05 (2) (d) 4.

4. Vintage Waiver provisions have been revised and clarified (applicable to Generation Units that operated prior to 1998) at 14.05 (2) (c) Specifically excluding from the necessity of a Vintage Waiver are the following (provided that, in the case of biomass plants, they meet the low-emission, advanced biomass power conversion technologies eligibility standards):

   a. A Generation Unit relocated into the ISO-NE Control Area or into an adjacent Control Area from outside those areas, provided that the Power Conversion Technology equipment did not previously operate in either area. Such a Unit provides electricity from Renewable Generation that is "new" to this region.

   b. A Generation Unit that did not previously utilize Eligible New Renewable Fuel(s) at any time prior to 1998. This addresses the conversion of pre-1998 fossil plants to RPS-eligible renewables.

   c. A Generation Unit installed at a site where a Renewable Generation Unit had operated prior to 1998, provided that the entire Power Generation Technology is replaced with post-1997 equipment, and excluding any landfill gas Unit located at the site of a pre-1998 landfill gas Unit. Previously, all such sites were subject to the Vintage Waiver provision. Also at 14.05 (1) (d) 4 and 14.05 (2) (b).

   d. See item 3.d, above.

5. Expands New Renewable Generation from grid-connected distributed generation to include electricity delivered onto the ISO New England grid from such Units outside of Massachusetts, subject to certain metering requirements. At 14.05 (1) (d) 1.

6. Imports from outside of the ISO New England Control Area:

   a. Limits the source of imports to Control Areas adjacent to the ISO New England Control Area, since it is not reasonable to claim, and currently cannot be documented, that electricity from beyond such adjacent areas came from RPS-Qualified Generation Units. 14.05 (5).

[4]This provision codifies the position enunciated by DOER in its October 27, 2005 *Policy Statement on the RPS Eligibility of Retooled Biomass Power Plants*. That *Policy Statement* replaced the *Biomass Retooling Guideline* (issued in April 2004). Both the *Guideline* and the *Policy Statement* were legally construed and issued based on DOER's authority under the RPS statute to ". . . consider any previously operational biomass facility retrofitted with advanced conversion technologies as a renewable energy generating source." During the effective term of the 2004 *Guideline*, DOER determined that, while not violative of the RPS statute, the *Guideline* should be revised, as reflected in the 2005 Policy Statement and in this provision of the amended regulation.

b. Clarifies that power imported into the ISO-NE Control Area from an RPS Qualified Generation Unit in an adjacent Control Area must be documented for each hour of the month, not averaged over the whole month. At 14.05 (5) (b) (2).

7. Other changes in definitions and provisions:

a. Introduces the "RPS Effective Date," when an RPS Qualified Generation Unit may begin earning MA RPS-qualified renewable energy Certificates (so-called "RECs") at the NEPOOL GIS. 14.06 (4).

b. Distinguishes between a "New Renewable Generation Unit" and the newly- defined term, "RPS Qualified Generation Unit." The latter includes both New Renewable Generation Units and also Units that qualify under the several waivers and special provisions, not all of whose output may qualify as New Renewable Generation. Vintage Generation Units, for example, are "qualified" but not "new." At 14.02.

c. Codifies that an Aggregation of small Units (typically photovoltaic systems) can apply for and collectively receive a single Statement of Qualification and be treated as a single RPS Qualified Generation Unit (a procedure already in practice and also provided for in the NEPOOL GIS Operating Rules). At 14.05 (6).

d. Codifies the acceptability of an "authorized agent" to act on behalf of Generation Unit(s) Owners or Operators. At 14.05(6) (b), 14.06 (1), and elsewhere.

e. Introduces a new Notification requirement regarding changes in a Unit's ownership, generation capacity, or contact information. At 14.06 (6).

f. Introduces a provision for a new Statement of Qualification to terminate 48 months from the date of issuance unless the Unit commences commercial operation within that period. At 14.06 (7).

g. Provides for existing Advisory Rulings to expire six months after the effective date of the Regulatory revisions. At 14.06 (8).

h. Commits DOER to provide, when it issues its decision at the end of 2007 regarding 2010-2014 RPS annual percentage increases, a date for a second such RPS extension decision. At 14.07 (2).

i. Designates the Massachusetts Technology Park Corporation as a recipient of Alternative Compliance Payments, but provides that DOER may designate another entity. At 14.08 (3)

j. Clarifies and codifies that the load obligation upon which the Retail Electric Suppliers must comply with the RPS minimum standard is to be based on the available NEPOOL GIS data representing retail load served, inclusive of distribution line losses. At 14.09 (2) (a) and (b).

k. Adds a Severability provision. At 14.13.

The above list is not exhaustive and is limited to identifying substantive changes. In addition, DOER's proposed revisions include some minor procedural or definitional clarifications, technical updates, corrections, and cross referential changes.